

Larry Laudan Springer

"An important collection of significant papers." American Scientist

This book consists of a collection of essays written between 1965 and 1981. Some have been published elsewhere; others appear here for the first time. Although dealing with different figures and different periods, they have a common theme: all are concerned with examining how the method of hypothesis came to be the ruling orthodoxy in the philosophy of science and the quasi-official methodology of the scientific community. It might have been otherwise. Barely three centuries ago, hypothetico deduction was in both disfavor and disarray. Numerous rival methods for scientific inquiry - including eliminative and enumerative induction, analogy and derivation from first principles - were widely touted. The method of hypothesis, known since antiquity, found few proponents between 1700 and 1850. During the last century, of course, that ordering has been inverted and - despite an almost universal acknowledgement of its weaknesses - the method of hypothesis (usually under such descriptions as 'hypothetico deduction' or 'conjectures and refutations') has become the orthodoxy of the 20th century. Behind the waxing and waning of the method of hypothesis, embedded within the vicissitudes of its fortunes, there is a fascinating story to be told. It is a story that forms an integral part of modern science and its philosophy.

Table of contents Annette Leßmöllmann and Thomas Glöning Preface – V Annette Leßmöllmann and Thomas Glöning Introduction to the volume – XI I Perspectives of research on scholarly and science communication Gregor Betz and David Lanus 1 Philosophy of science for science communication in twenty-two questions – 3 Friederike Hendriks and Dorothe Kienhues 2 Science understanding between scientific literacy and trust: contributions from psychological and educational research – 29 Hans-Jürgen Bucher 3 The contribution of media studies to the understanding of science communication – 51 Mike S. Schäfer, Sabrina H. Kessler and Birte Fähnrich 4 Analyzing science communication through the lens of communication science: Reviewing the empirical evidence – 77 Hannah Schmid-Petri and Moritz Bürger 5 Modeling science communication: from linear to more complex models – 105 Gábor Á. Zemplén 6 The contribution of laboratory studies, science studies and Science and Technology Studies (STS) to the understanding of scientific communication – 123 Nina Janich 7 The contribution of linguistics and semiotics to the understanding of science communication – 143 Britt-Marie Schuster 8 The contribution of terminology research to the understanding of science communication – 167 Thorsten Pohl 9 The study of student academic writing – 187 II Text types, media, and practices of science communication Thomas Glöning 10 Epistemic genres – 209 Luc Pauwels 11 On the nature and role of visual representations in knowledge production and science communication – 235 Henning Lobin 12 The lecture and the presentation – rhetorics and technology – 257 Sylvia Jaworska 13 Spoken language in science and the humanities – 271 Gerd Fritz 14 Scholarly reviewing – 289 Gerd Fritz 15 Scientific controversies – 311 Thomas Glöning 16 Symbolic notation in scientific communication: a panorama – 335 Michel Serfati † 17 The rise of symbolic notation in scientific communication: the case of mathematics – 357 Benedetto Lepori and Sara Greco 18 Grant proposal writing as a dialogic process – 377 III Science, scientists, and the public Wolf-Andreas Liebert 19 Communicative strategies of popularization of science (including science exhibitions, museums, magazines) – 399 Sharon Dunwoody 20 Science journalism – 417 Holger Wormer 21 Teaching science journalism as a blueprint for future journalism education – 439 Charlotte Autzen and Emma Weitkamp 22 Science communication and public relations: beyond borders – 465 Philipp Schrögel and Christian Humm 23 Science communication, advising, and advocacy in public debates – 485 Philipp Niemann, Laura Bittner, Christiane Hauser and Philipp Schrögel 24

Forms of science presentations in public settings – 515 IV Historical perspectives on science communication Thomas Gloning 25 Historical perspectives on internal scientific communication – 547 Michael Prinz 26 Academic teaching: the lecture and the disputation in the history of erudition and science – 569 Monika Hanauska 27 Historical aspects of external science communication – 585 V Science communication: present and future Martina Franzen 28 Reconfigurations of science communication research in the digital age – 603 Peter Reuter and Andreas Brandtner 29 The library in a changing world of scientific communication – 625 Mareike König 30 Scholarly communication in social media – 639 Annette Leßmöllmann 31 Current trends and future visions of (research on) science communication – 657

The institutionalization of History and Philosophy of Science as a distinct field of scholarly endeavour began comparatively early - though not always under that name - in the Australasian region. An initial lecturing appointment was made at the University of Melbourne immediately after the Second World War, in 1946, and other appointments followed as the subject underwent an expansion during the 1950s and 1960s similar to that which took place in other parts of the world. Today there are major Departments at the University of Melbourne, the University of New South Wales and the University of Wollongong, and smaller groups active in many other parts of Australia and in New Zealand.

"Australasian Studies in History and Philosophy of Science" aims to provide a distinctive publication outlet for Australian and New Zealand scholars working in the general area of history, philosophy and social studies of science. Each volume comprises a group of essays on a connected theme, edited by an Australian or a New Zealander with special expertise in that particular area. Papers address general issues, however, rather than local ones; parochial topics are avoided. Further more, though in each volume a majority of the contributors is from Australia or New Zealand, contributions from elsewhere are by no means ruled out. Quite the reverse, in fact - they are actively encouraged wherever appropriate to the balance of the volume in question.

Der Band ist das Ergebnis des Projekts „Islamische Lernkulturen“, einer Kooperation zwischen den Universitäten Erlangen und Bayreuth. Die Forschung der Arbeitsgruppe ist von der Grundannahme geleitet, dass Formen und Funktionen der Unterrichtung islamischer Theologie nicht bereits in ihr selbst angelegt sind, sondern vor dem Hintergrund der breiteren geistigen, gesellschaftlichen und politischen Rahmenbedingungen ausdifferenziert werden. Die Beiträge beleuchten die Lehr- und Lernformen islamischer Theologie in Geschichte und Gegenwart aus unterschiedlichen Perspektiven. Zum einen sollen dadurch die unterschiedlichen Kontexte, Ressourcen und Praktiken der theologischen Unterweisung und des Lernens herausgearbeitet werden, zum anderen wird ein Beitrag zur Herausbildung eines reflektierten Selbstverständnisses der Islamischen Theologie in Deutschland geleistet. Dabei kommen muslimische Theologinnen und Theologen unterschiedlichster Ausrichtung ebenso zu Wort wie Islam- und Sozialwissenschaftler/innen. In unterschiedlichen Fallstudien werden Grundlagen von Bildung und Wissen, die Übertragbarkeit islamischer Lehr- und Lernkulturen in das deutsche Wissenschaftssystem, Formen und Funktionen des neuen Faches sowie (politische) Erwartungen daran thematisiert.

Mainly focusing on processing uncertainty, this book presents state-of-the-art techniques and demonstrates their use in applications to econometrics and other areas. Processing uncertainty is essential, considering that computers – which help us understand real-life processes and make better decisions based on that understanding – get their information from measurements or from expert estimates, neither of which is ever 100% accurate. Measurement uncertainty is usually described using probabilistic techniques, while uncertainty in expert estimates is often described using fuzzy techniques. Therefore, it is important to master both techniques for processing data. This book is highly recommended for researchers and students interested in the latest results and challenges in uncertainty, as well as practitioners who want to learn how to use the corresponding state-of-the-art techniques.

This book offers a comprehensive and accessible introduction to the epistemology of science. It not only introduces readers to the general epistemological discussion of the nature of knowledge, but also provides key insights into the particular nuances of scientific knowledge. No prior knowledge of philosophy or science is assumed by *The Nature of Scientific Knowledge*. Nevertheless, the reader is taken on a journey through several core concepts of epistemology and philosophy of science that not only explores the characteristics of the scientific knowledge of individuals but also the way that the development of scientific knowledge is a particularly social endeavor. The topics covered in this book are of keen interest to students of epistemology and philosophy of science as well as science educators interested in the nature of scientific knowledge. In fact, as a result of its clear and engaging approach to understanding scientific knowledge *The Nature of Scientific Knowledge* is a book that anyone interested in scientific knowledge, knowledge in general, and any of a myriad of related concepts would be well advised to study closely.

An introduction to the new area of ignorance studies that examines how science produces ignorance—both actively and passively, intentionally and unintentionally. We may think of science as our foremost producer of knowledge, but for the past decade, science has also been studied as an important source of ignorance. The historian of science Robert Proctor has coined the term agnotology to refer to the study of ignorance, and much of the ignorance studied in this new area is produced by science. Whether an active or passive construct, intended or unintended, this ignorance is, in Proctor's words, “made, maintained, and manipulated” by science. This volume examines forms of scientific ignorance and their consequences. A dialogue between Proctor and Peter Galison offers historical context, presenting the concerns and motivations of pioneers in the field. Essays by leading historians and philosophers of science examine the active construction of ignorance by biased design and interpretation of experiments and empirical studies, as seen in the “false advertising” by climate change deniers; the “virtuous” construction of ignorance—for example, by curtailing research on race- and gender-related cognitive differences; and ignorance as the unintended by-product of choices made in the research process, when rules, incentives, and methods encourage an emphasis on the beneficial and commercial effects of industrial chemicals, and when certain concepts and even certain groups' interests are inaccessible in a given conceptual framework. Contributors Martin Carrier, Carl F. Cranor, Peter Galison, Paul Hoyningen-Huene, Philip Kitcher, Janet Kourany, Hugh Lacey, Robert Proctor, Londa Schiebinger, Miriam Solomon, Torsten Wilholt

Integrated History and Philosophy of Science (iHPS) is commonly understood as the study of science from a combined historical and philosophical perspective. Yet, since its gradual formation as a research field, the question of how to suitably integrate both perspectives remains open. This volume presents cutting edge research from junior iHPS scholars, and in doing so provides a snapshot of current developments within the field, explores the connection between iHPS and other academic disciplines, and demonstrates some of the topics that are attracting the attention of scholars who will help define the future of iHPS.

Laudan argues that the debate between positivists and post-positivist relativists can only be resolved by seeing that these unacceptable positions rest on the same unexamined set of assumptions. By targeting and critiquing these assumptions, he lays the groundwork for a post-positivist philosophy of science that does not provide aid and comfort to the enemies of reason.

Martin Folkes (1690-1754): Newtonian, Antiquary, Connoisseur is a cultural and intellectual biography of the only President of both the Royal Society and the Society of Antiquaries. Sir Isaac Newton's protg, astronomer, mathematician, freemason, art connoisseur, Voltaire's friend and Hogarth's patron, his was an intellectually vibrant world. Folkes was possibly the best-connected natural philosopher and antiquary of his age, an epitome of Enlightenment sociability, and yet he was a surprisingly neglected figure, the long shadow of Newton eclipsing his brilliant disciple. A complex figure, Folkes edited Newton's posthumous works in biblical chronology, yet was a religious skeptic and one of the first members of the gentry to marry an actress. His interests were multidisciplinary, from his authorship of the first complete history of the English coinage, to works concerning ancient architecture, statistical probability, and astronomy. Rich archival material, including Folkes's travel diary, correspondence, and his library and art collections permit reconstruction through Folkes's eyes of what it was like to be a collector and patron, a Masonic freethinker, and antiquarian and virtuoso in the days before 'science' became sub-specialised. Folkes's virtuosic sensibility and possible role in the unification of the Society of Antiquaries and the Royal Society tells against the historiographical assumption that this was the age in which the 'two cultures' of the humanities and sciences split apart, never to be reunited. In Georgian England, antiquarianism and 'science' were considered largely part of the same endeavour.

This volume assembles leading scholars to examine how their respective theoretical positions relate to the artifactual nature of law. It offers a complete analysis of what is ontologically entailed by the claim that law - including legal systems, legal norms, and legal institutions - is an artifact, and what consequences, if any, this claim has for philosophical accounts of law. Examining the artifactual nature of law draws attention to the role that intention, function, and action play in the ontological structure of law, and how these attributes interact with rules. It puts the role of author and authorship at the center of its analysis of legal ontology, and widens the scope that functional analysis can legitimately have in legal theory, emphasizing how the content of law depends on how it is used. Furthermore, the appeal to artifacts brings to the fore questions about the significance of concepts for the existence of law, and makes available new tools for legal interpretation. The notion of artifactuality offers a starting point from which to approach the basic dilemma of whether it is meaningful to search for essential, necessary, and sufficient features of law, a question that in current legal theory is put when deciding what kind of enterprise legal theory is from a methodological point of view, namely whether it is descriptive

or prescriptive. This volume unearths insights and observations of value to all those looking to deepen their understanding of how the law is understood and experienced.

"For decades, scholars have been calling into question the universality of disciplinary objects and categories. The decay of master narratives showcases a distrust of universals, while deepening particularity seems to promise nothing but further dissolution. For Jason Josephson-Storm, these are dead ends. He wants to offer a path forward, which he terms metamodernism. This is the first full-length work to line up the various critiques of disciplinary master-categories (religion, science, art, etc.) and trace their affinities and shared conceptual roots. It suggests that if these critiques are granted, they tell us something fundamental about the mechanisms through which concepts and social categories are produced and maintained. They suggest that the social world should be seen in terms of a "process social ontology" with temporary zones of stability called "social kinds." This amounts to a new theory of society and a new methodology for research in the human sciences. The work also broadens to fundamental issues of the relationship between knowledge and value, promoting not skepticism but zeteticism--a stance directed toward humble, emancipatory knowledge. Valuing this form of knowledge allows postmodernism to be channeled into a critical virtue ethics directed toward multi-species"--

Many of us view the world of science as a firm bastion of knowledge, with each new discovery and further illumination adding to an unshakable foundation of natural truths. *Weak Knowledge* aims to rattle our faith, not in core certainties of scientific findings but in their strength as accessible resources. The authors show how, throughout history, many bodies of research have become precarious due to a host of factors. These factors have included cultural or social disinterest, feeble empirical evidence or theoretical justifications, and a lack of practical applications in a given field's findings. This book brings together cases from a range of historical periods and disciplines, ranging from personal medicine to climatology, to illuminate the specific forms, functions, and dynamics of so-called "weak" bodies of knowledge.

Rachel Laudan tells the remarkable story of the rise and fall of the world's great cuisines—from the mastery of grain cooking some twenty thousand years ago, to the present—in this superbly researched book. Probing beneath the apparent confusion of dozens of cuisines to reveal the underlying simplicity of the culinary family tree, she shows how periodic seismic shifts in "culinary philosophy"—beliefs about health, the economy, politics, society and the gods—prompted the construction of new cuisines, a handful of which, chosen as the cuisines of empires, came to dominate the globe. *Cuisine and Empire* shows how merchants, missionaries, and the military took cuisines over mountains, oceans, deserts, and across political frontiers. Laudan's innovative narrative treats cuisine, like language, clothing, or architecture, as something constructed by humans. By emphasizing how cooking turns farm products into food and by taking the globe rather than the nation as the stage, she challenges the agrarian, romantic, and nationalistic myths that underlie the contemporary food movement.

Feminism, Science, and the Philosophy of Science brings together original essays by both feminist and mainstream philosophers of science that examine issues at the intersections of feminism, science, and the philosophy of science. Contributors explore parallels and tensions between feminist approaches to science and other approaches in the philosophy of science and more general science studies. In so doing, they explore notions at the heart of the philosophy of science, including the nature of objectivity, truth, evidence, cognitive agency, scientific method, and the relationship between science and values.

For a philosopher with an abiding interest in the nature of objective knowledge systems in science, what could be more important than trying to think in terms of those very subjects of such knowledge to which men like Galileo, Newton, Max Planck, Einstein and others devoted their entire lifetimes? In certain respects, these systems and their structures may not be beyond the grasp of a linguistic conception of science, and scientific change, which men of science and philosophy have advocated in various forms in recent times. But certainly it is wrong-headed to think that one's conception of science can be based on an identification of its theories with languages in which they may be, my own alternatively, framed. There may be more than one place in book (1983: 87) where they may seem to get confused with each other, quite against my original intentions. The distinction between the objective knowledge systems in science and the dynamic frameworks of the languages of the special individual sciences, in which their growth can be embedded in significant ways, assumes here, therefore, much importance. It must be recognized that the problems concerning scientific change, which these systems undergo, are not just problems concerning language change.

In this volume of 15 articles, contributors from a wide range of disciplines present their analyses of Disney movies and Disney music, which are mainstays of popular culture. The power of the Disney brand has heightened the need for academics to question whether Disney's films and music function as a tool of the Western elite that shapes the views of those less empowered. Given its global reach, how the Walt Disney Company handles the role of race, gender, and sexuality in social structural inequality merits serious reflection according to a number of the articles in the volume. On the other hand, other authors argue that Disney productions can help individuals cope with difficult situations or embrace progressive thinking. The different approaches to the assessment of Disney films as cultural artifacts also vary according to the theoretical perspectives guiding the interpretation of both overt and latent symbolic meaning in the movies. The authors of the 15 articles encourage readers to engage with the material, showcasing a variety of views about the good, the bad, and the best way forward.

This book explains, in simple terms, with a minimum of mathematics, why things can appear to be in two places at the same time, why correlations between simultaneous events occurring far apart cannot be explained by local mechanisms, and why, nevertheless, the quantum theory can be understood in terms of matter in motion. No need to worry, as some people do, whether a cat can be both dead and alive, whether the moon is there when nobody looks at it, or whether quantum systems need an observer to acquire definite properties. The author's inimitable and even humorous style makes the book a pleasure to read while bringing a new clarity to many of the longstanding puzzles of quantum physics.

In the early twentieth century, American earth scientists were united in their opposition to the new--and highly radical--notion of

continental drift, even going so far as to label the theory "unscientific." Some fifty years later, however, continental drift was heralded as a major scientific breakthrough and today it is accepted as scientific fact. Why did American geologists reject so adamantly an idea that is now considered a cornerstone of the discipline? And why were their European colleagues receptive to it so much earlier? This book, based on extensive archival research on three continents, provides important new answers while giving the first detailed account of the American geological community in the first half of the century. Challenging previous historical work on this episode, Naomi Oreskes shows that continental drift was not rejected for the lack of a causal mechanism, but because it seemed to conflict with the basic standards of practice in American geology. This account provides a compelling look at how scientific ideas are made and unmade.

Philosophers of science frequently bemoan (or cheer) the fact that today, with the supposed collapse of logical empiricism, there are now ;;10 grand systems. However, although this mayor may not be true, and if true mayor may not be a cause for delight, no one should conclude that the philosophy of science has ground to a halt, its problems exhausted and its practioners dispirited. In fact, in this post Kuhnian age the subject has never been more alive, as we work with enthusiasm on special topics, historical and conceptual. And no topic has grown and thrived quite like the philosophy of biology, which now has many students in the field producing high-quality articles and monographs. The success of this subject is due above all to the work and influence of one man: David Hull. In his own writings and in the support he has given to others, he has shown true leadership, in the best Platonic sense. It is now twenty years since Hull fnt gave his seminal paper 'What the philosophy of biology is not', and to mark that point and to show our respect, gratitude and affection to its author, a number of us who owe much to Hull decided to produce a volume of essays on and around themes to which Hull has spoken.

In 1996 physicist Alan Sokal published an essay in *Social Text*--an influential academic journal of cultural studies--touting the deep similarities between quantum gravitational theory and postmodern philosophy. Soon thereafter, the essay was revealed as a brilliant parody, a catalog of nonsense written in the cutting-edge but impenetrable lingo of postmodern theorists. The event sparked a furious debate in academic circles and made the headlines of newspapers in the U.S. and abroad. Now in *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science*, Sokal and his fellow physicist Jean Bricmont expand from where the hoax left off. In a delightfully witty and clear voice, the two thoughtfully and thoroughly dismantle the pseudo-scientific writings of some of the most fashionable French and American intellectuals. More generally, they challenge the widespread notion that scientific theories are mere "narrations" or social constructions.

is both a player and a spectator, is explained here illuminatingly. With regard to logical ambiguities and paradoxes, which may show up in all these topics, he, like Locker, is of the opinion that, philosophically speaking all apory of a lower level have to be accepted an a higher level of thinking. After the above expositions of a more general purport we turn now to two contributions which are particularly focused on Bohr's concept of complementarity. First is the article of Hilgevoord who briefly and non-technically describes a short curriculum vitae of the concept beginning with Planck through Bohr to Heisenberg and Schrodinger. Included in this short story, of course, is the famous wave-particle duality and the paradox inherent in it many physicists are still saddled with. How this paradox was solved is explained here simply and clearly: first, generally by quantum mechanics where the disturbance theory of measurement was supposed to be of some relevance, and secondly,

where this theory is further refined leading to Bohr's conclusion of the essential unsolvability, and accordingly the completeness, of the statistical element of quantum mechanics. The reading of this short article may arouse questions and surmises whether complementarity has been ruminated by Bohr to tame the law of excluded middle dividing the well-defined content of position measurement from that of momentum measurement, just to mention one. Whatever it may be the idea of complementarity betrays the perplexity of the observing system in dealing with nature's complexity.

Science and the Quest for Reality is an interdisciplinary anthology that situates contemporary science within its complex philosophical, historical, and sociological contexts. The anthology is divided between, firstly, characterizing science as an intellectual activity and, secondly, defining its social role. The philosophical and historical vicissitudes of science's truth claims has raised profound questions concerning the role of science in society beyond its technological innovations. The deeper philosophical issues thus complement the critical inquiry concerning the broader social and ethical influence of contemporary science. In the tradition of the 'Main Trends of the Modern World' series, this volume includes both classical and contemporary works on the subject.

Nursing theory is a major part of all nursing courses and nurses are encouraged to use theories in practice, but it is not always easy for the student to make a real connection between the two. Drawing on many years' experience of teaching and research, Hugh McKenna addresses the theory needs of both students and qualified staff. He demystifies the confusing terminology associated with nursing theory and shows how all nurses can build theory from practice through reflection and analysis. This text offers step-by-step guidelines on: * how to analyse concepts * how to generate and select theory * how to apply and test theory in practice. Written in a friendly, easy to read style, Nursing Theories and Models puts forward realistic strategies for bridging the theory-practice gap.

To celebrate Adolf Grünbaum's sixtieth birthday by offering him this bouquet of essays written for this purpose was the happy task of an autonomous Editorial Committee: Wesley C. Salmon, Nicholas Rescher, Larry Laudan, Carl G. Hempel, and Robert S. Cohen. To present the book within the Boston Studies in the Philosophy of Science was altogether fitting and natural, for Grünbaum has' been friend and supporter of philosophy of science at Boston University for twenty-five years, and unofficial godfather to the Boston Colloquium. To regret that we could not include contributions from all his well-wishers, critical admirers and admiring critics, is only to regret that we did not have an encyclopedic space at the committee's disposal. But we, and all involved in this book, speak for all the others in the philosophical, scientific, and personal worlds of Adolf Grünbaum in greeting him on May 15, 1983, with our wishes for his health, his scholarship, his happiness. Our gratitude is due to Carolyn Fawcett for her care and accuracy in editing this book, and for the preparation of the Index; and to Elizabeth McMunn for her help again and again, especially in preparation of the Bibliography of the Published Writings of Adolf Grünbaum; and to Thelma Grünbaum for encouraging, planning, and cheering. Boston University R.S.C. Center for the Philosophy and History of Science M.W.W.

Scientific realism is the position that the aim of science is to advance on truth and increase knowledge about observable and unobservable aspects of the mind-independent world which we inhabit. This book articulates and defends that position. In presenting a clear formulation and addressing the major arguments for scientific realism Sankey appeals to philosophers beyond the community of, typically Anglo-American, analytic philosophers of science to appreciate and understand the doctrine. The book emphasizes the epistemological aspects of scientific realism and contains an original solution to the problem of induction that rests on an appeal to the principle of uniformity of nature. In recent years, many members of the intellectual community have embraced a radical relativism regarding knowledge in general and scientific knowledge in particular, holding that Kuhn, Quine, and Feyerabend have knocked the traditional picture of scientific knowledge into

a cocked hat. Is philosophy of science, or mistaken impressions of it, responsible for the rise of relativism? In this book, Laudan offers a trenchant, wide-ranging critique of cognitive relativism and a thorough introduction to major issues in the philosophy of knowledge. This book systematically creates a general descriptive theory of scientific change that explains the mechanics of changes in both scientific theories and the methods of their assessment. It was once believed that, while scientific theories change through time, their change itself is governed by a fixed method of science. Nowadays we know that there is no such thing as an unchangeable method of science; the criteria employed by scientists in theory evaluation also change through time. But if that is so, how and why do theories and methods change? Are there any general laws that govern this process, or is the choice of theories and methods completely arbitrary and random? Contrary to the widespread opinion, the book argues that scientific change is indeed a law-governed process and that there can be a general descriptive theory of scientific change. It does so by first presenting meta-theoretical issues, divided into chapters on the scope, possibility and assessment of theory of scientific change. It then builds a theory about the general laws that govern the process of scientific change, and goes into detail about the axioms and theorems of the theory.

Paul describes the rise of statistical cosmology and how it has set the stage for many of the most significant developments of twentieth-century astronomy.

Beginning with the premise that the principal function of a criminal trial is to find out the truth about a crime, Larry Laudan examines the rules of evidence and procedure that would be appropriate if the discovery of the truth were, as higher courts routinely claim, the overriding aim of the criminal justice system. Laudan mounts a systematic critique of existing rules and procedures that are obstacles to that quest. He also examines issues of error distribution by offering the first integrated analysis of the various mechanisms - the standard of proof, the benefit of the doubt, the presumption of innocence and the burden of proof - for implementing society's view about the relative importance of the errors that can occur in a trial.

Information technology has been used in organisational settings and for organisational purposes such as accounting, for a half century, but IT is now increasingly being used for the purposes of mediating and regulating complex activities in which multiple professional users are involved, such as in factories, hospitals, architectural offices, and so on. The economic importance of such coordination systems is enormous but their design often inadequate. The problem is that our understanding of the coordinative practices for which these systems are developed is deficient, leaving systems developers and software engineers to base their designs on commonsensical requirements analyses. The research reflected in this book addresses these very problems. It is a collection of articles which establish a conceptual foundation for the research area of Computer-Supported Cooperative Work. This third volume of Boston Studies in the Philosophy of Science contains papers which are based upon Colloquia from 1964 to 1966. In most cases, they have been substantially modified subsequent to presentation and discussion. Once again we publish work which goes beyond technical analysis of scientific theories and explanations in order to include philosophical reflections upon the history of science and also upon the still problematic interactions between metaphysics and science. The philosophical

history of scientific ideas has increasingly been recognized as part of the philosophy of science, and likewise the cultural context of the genesis of such ideas. There is no school or attitude to be taken as defining the scope or criteria of our Colloquium, and so we seek to understand both analytic and historical aspects of science. This volume, as the previous two, constitutes a substantial part of our final report to the U. S. National Science Foundation, which has continued its support of the Boston Colloquium for the Philosophy of Science by a grant to Boston University. That report will be concluded by a subsequent volume of these Studies. It is a pleasure to record our thanks to the Foundation for its confidence and funds. We dedicate this book to the memory of Norwood Russell Hanson. During this academic year of 1966-67, this beloved and distinguished American philosopher participated in our Colloquium, and he did so before.

[Copyright: 67c1eedb4e8ea99f5996a5789195382f](#)